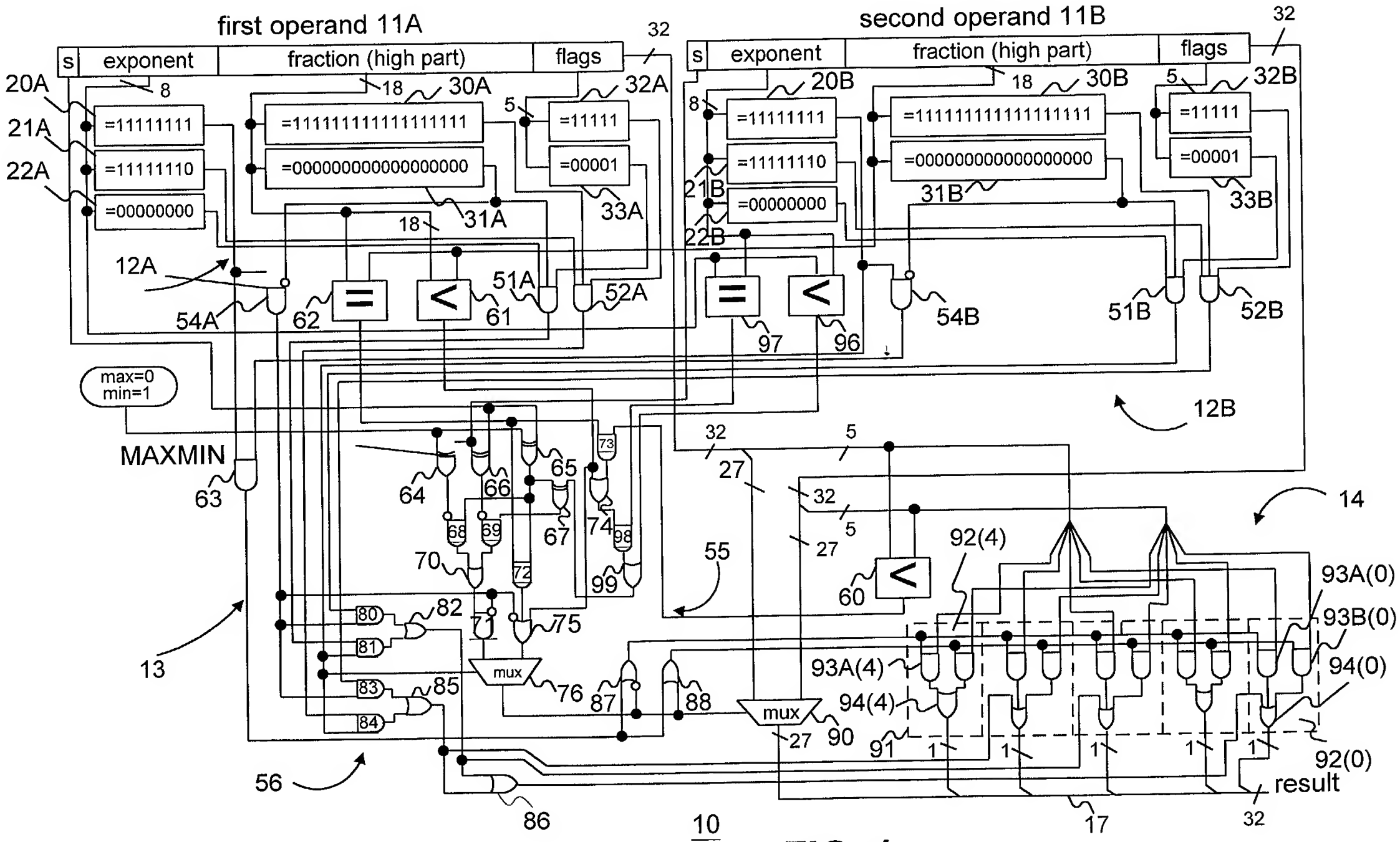
first operand 11A
second operand 11B
s
exponent
fraction (high part)
flags
32
8
18
5
20A
21A
22A
=11111111
=11111110
=00000000
=11111111111111111
=00000000000000000
=11111
=00001
30A
31A
32A
33A
20B
21B
22B
30B
31B
32B
33B
12A
12B
54A
54B
51A
52A
51B
52B
62
61
97
96
max=0
min=1
MAXMIN
63
64
65
66
67
68
69
70
71
72
73
74
75
98
99
55
13
14
56
80
81
82
83
84
85
86
mux
76
87
88
27
60
92(4)
93A(0)
93B(0)
94(0)
93A(4)
94(4)
90
91
92(0)
result
17
10

FIG. 1

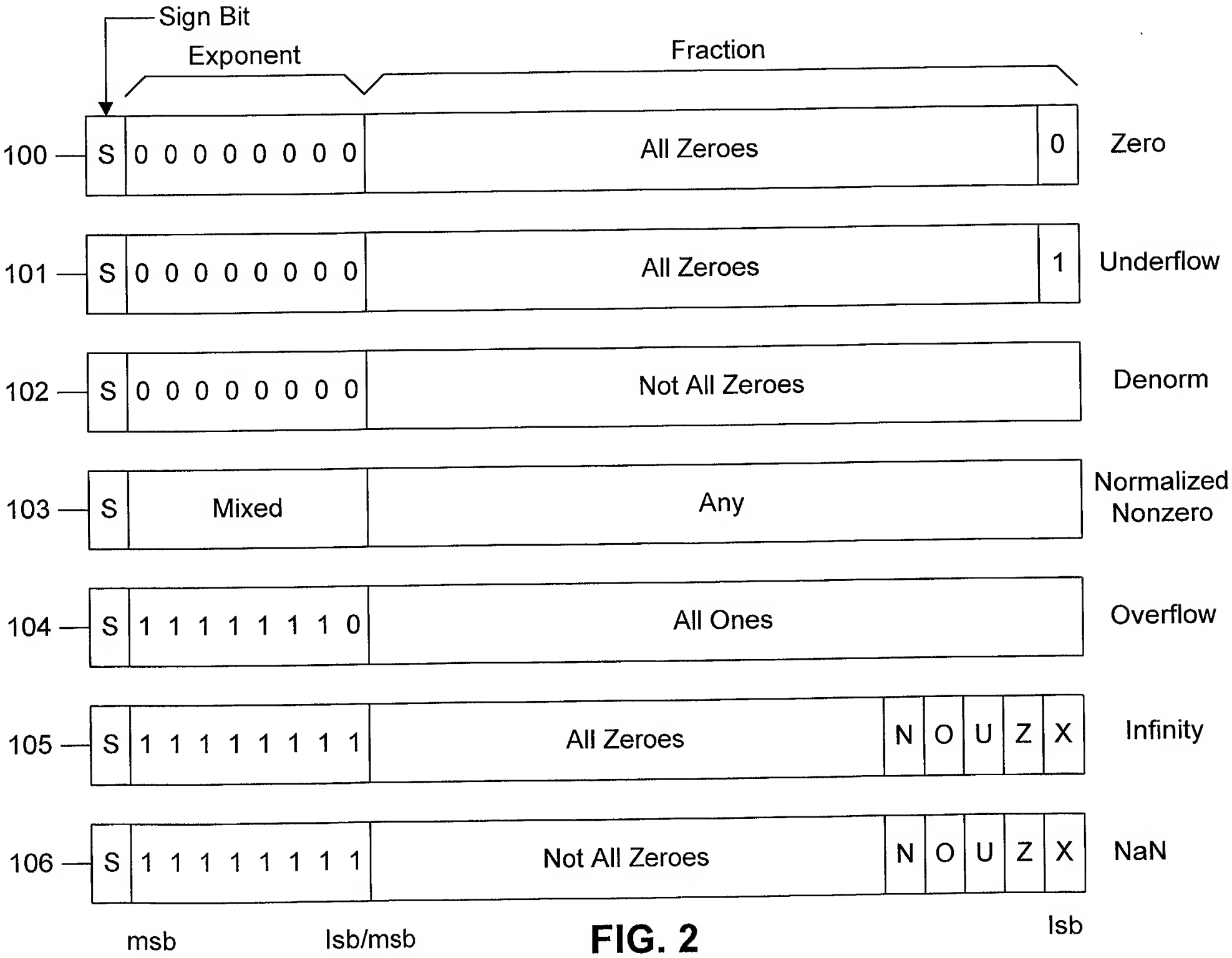
Sign Bit
Exponent
Fraction
100
S
0 0 0 0 0 0 0 0
All Zeroes
0
Zero
101
S
0 0 0 0 0 0 0 0
All Zeroes
1
Underflow
102
S
0 0 0 0 0 0 0 0
Not All Zeroes
Denorm
103
S
Mixed
Any
Normalized Nonzero
104
S
1 1 1 1 1 1 1 0
All Ones
Overflow
105
S
1 1 1 1 1 1 1 1
All Zeroes
N O U Z X
Infinity
106
S
1 1 1 1 1 1 1 1
Not All Zeroes
N O U Z X
NaN
msb
lsb/msb
lsb

FIG. 2

	Value	s	e . . .	f . . .
310	+ ∞	0	1 1 1 . . .	0 0 0 . . .
320	- ∞	1	1 1 1 . . .	0 0 0 . . .
330	NaN	X	1 1 1 . . .	Not (0 0 0 . . .)
340	+ 0	0	0 0 0 . . .	0 0 0 . . .
350	- 0	1	0 0 0 . . .	0 0 0 . . .
360	$(-1)^s 2^{e-bias}(1. \mid f . . .)$	X	Not (0 0 0 . . .) and Not (1 1 1 . . .)	X
370	$(-1)^s 2^{e-bias+1}(0. \mid f . . .)$	X	0 0 0 . . .	Not (0 0 0 . . .)

X = Don't Care

FIG. 3 (Prior Art)